



LL	IIIIII	NN	NN	KK	KK	EEEEEEEEE	RRRRRRRR
LL	IIIIII	NN	NN	KK	KK	EEEEEEEEE	RRRRRRRR
LL	II	NN	NN	KK	EE	RR	RR
LL	II	NN	NN	KK	EE	RR	RR
LL	II	NNNN	NN	KK	EE	RR	RR
LL	II	NNNN	NN	KK	EE	RR	RR
LL	II	NN NN	NN	KKKKKK	EE	RRRRRRRR	
LL	II	NN NN	NN	KKKKKK	EE	RRRRRRRR	
LL	II	NN NNNN	KK	KK	EE	RR RR	
LL	II	NN NNNN	KK	KK	EE	RR RR	
LL	II	NN NN	KK	KK	EE	RR RR	....
LL	II	NN NN	KK	KK	EE	RR RR	....
LLLLLLLL	IIIIII	NN	NN	KK	KK	EEEEEEEEE	RR RR
LLLLLLLL	IIIIII	NN	NN	KK	KK	EEEEEEEEE	RR RR

LL	IIIIII	SSSSSSSS
LL	IIIIII	SSSSSSSS
LL	II	SS
LLLLLLLL	IIIIII	SSSSSSSS
LLLLLLLL	IIIIII	SSSSSSSS

```
1 0001 0 MODULE LNK_MAIN
2 0002 0 (IDENT = 'V04-000'
3 0003 0 ,MAIN = LNK$START
4 0004 0 ,ADDRESSING MODE
5 0005 0 (EXTERNAL = GENERAL
6 0006 0 ,NONEXTERNAL = LONG_RELATIVE
7 0007 0 ) $ =
8 0008 0
9 0009 1 BEGIN
10 0010 1
11 0011 1
12 0012 1 ****
13 0013 1 *
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31 0031 1 *
32 0032 1 *
33 0033 1 ****
34 0034 1
35 0035 1
36 0036 1
37 0037 1
38 0038 1
39 0039 1 ++
40 0040 1
41 0041 1 MODULE: LNK_MAIN
42 0042 1
43 0043 1 FACILITY: LINKER
44 0044 1
45 0045 1 ABSTRACT: THIS IS THE MAINLINE CONTROL ROUTINE WHICH CALLS EVERYTHING ELSE
46 0046 1
47 0047 1 HISTORY:
48 0048 1
49 0049 1 VERSION: X01.00
50 0050 1
51 0051 1 AUTHOR: T.J. PORTER 03-JAN-77
52 0052 1
53 0053 1 MODIFIED BY:
54 0054 1
55 0055 1 V03-020 ADE0001 Alan D. Eldridge 08-Aug-1982
56 0056 1 Increment Linker version to '04-00'
57 0057 1
```

58	0058	1	V03-019	JWT0074	Jim Teague	09-Dec-1982
59	0059	1		Increment linker minor id for Debugger image header	changes.	
60	0060	1				
61	0061	1	V03-018	JWT0044	Jim Teague	30-Jul-1982
62	0062	1		Open file performance boost.		
63	0063	1	V03-017	JWT0040	Jim Teague	25-Jun-1982
64	0064	1		Version number to 3A.		
65	0065	1	V03-016	BLS0170	Benn Schreiber	15-Apr-1982
66	0066	1		Correct handling of library errors		
67	0067	1	V03-015	BLS0159	Benn Schreiber	17-Mar-1982
68	0068	1		Set inhib_msg when exiting.		
69	0069	1	V03-014	BLS0111	Benn Schreiber	22-Nov-1981
70	0070	1		Complete shareable image psect handling/migration		
71	0071	1	V03-013	BLS0101	Benn Schreiber	7-Nov-1981
72	0072	1		Multiple modifications...see other modules.		
73	0073	1	V03-012	BLS0090	Benn Schreiber	26-Oct-1981
74	0074	1		Module-local symbols		
75	0075	1	V03-011	BLS0078	Benn Schreiber	8-Sep-1981
76	0076	1		Several minor fixes.		
77	0077	1	V03-010	BLS0074	Benn Schreiber	29-Aug-1981
78	0078	1		More work on based shareable images		
79	0079	1	V03-009	BLS0072	Benn Schreiber	25-Aug-1981
80	0080	1		Enhance based image capabilities		
81	0081	1	V03-008	BLS0069	Benn Schreiber	15-Aug-1981
82	0082	1		Rework pass 2. Fix miscellaneous bugs		
83	0083	1	V03-007	(Lost)		
84	0084	1				
85	0085	1	V03-006	BLS0049	Benn Schreiber	22-Mar-1981
86	0086	1		Allow positioning of pic shareable images in cluster= option		
87	0087	1	V03-005	BLS0046	Benn Schreiber	14-Mar-1981
88	0088	1		Random collection of bug fixes. Issue info message if		
89	0089	1		creating PIC shareable image and non-pic data or non-pic		
90	0090	1		shareable image input.		
91	0091	1	V03-004	BLS0040	Benn Schreiber	12-Feb-1981
92	0092	1		Force psects in collect= option to be global.		
93	0093	1	V03-003	BLS0035	Benn Schreiber	19-Jan-1981
94	0094	1		65K psects		
95	0095	1	V03-002	BLS0029	Benn Schreiber	21-Dec-1980
96	0096	1		Library of shareable images.		
97	0097	1	V03-001	BLS0007	Benn Schreiber,	3-Jun-1980
98	0098	1				
99	0099	1				
100	0100	1				
101	0101	1				
102	0102	1				
103	0103	1				
104	0104	1				
105	0105	1				
106	0106	1				
107	0107	1				
108	0108	1				
109	0109	1				
110	0110	1				
111	0111	1				
112	0112	1				
113	0113	1				
114	0114	1				

LNK MAIN  
V04=000

: 115 0115 1 |--  
: 116 0116 1 |--

E 16  
16-Sep-1984 00:04:27  
14-Sep-1984 12:40:27 VAX-11 Bliss-32 V4.0-742  
[LINKER.SRC]LINKER.B32;1

Page 3  
(1)

Convert data structures to MDL.

```
118 0117 1
119 0118 1
120 0119 1 ++
121 0120 1
122 0121 1 FUNCTIONAL DESCRIPTION:
123 0122 1
124 0123 1
125 0124 1 THIS MODULE CONTAINS THE MAINLINE AND THE TERMINATION ROUTINE
126 0125 1 OF THE LINKER.
127 0126 1 --
128 0127 1
129 0128 1
130 0129 1 LIBRARY
131 0130 1 'LIBL32'; ! SYSTEM SERVICES MACROS
132 0131 1 REQUIRE 'PREFIX'; ! VARIABLES, MACROS ETC.
133 0132 1 LIBRARY
134 0247 1 'DATBAS'; ! INTERNAL DATA BASE
135 0248 1
136 0249 1
137 0250 1 FORWARD ROUTINE
138 0251 1 LNK$EXIT : NOVALUE; ! TERMINATION ROUTINE
139 0252 1
140 0253 1 EXTERNAL ROUTINE
141 0254 1 LNK$CLOSEFILE . NOVALUE, ! CLOSE THE CURRENT OBJ FILE
142 0255 1 LNK$CLOSMAPFIL, ! CLOSE THE MAP FILE
143 0256 1 LNK$CLOSIMGFIL, ! CLOSE THE IMAGE FILE
144 0257 1 LNK$CLOSYMOUT, ! CLOSE SYMBOL TABLE OUTPUT
145 0258 1 LNK$IMGINIT, ! INITIALIZATION OF IMAGE IN MEMORY
146 0259 1 LNK$INIT, ! INITIALIZATION ROUTINE
147 0260 1 LNK$FLUSHIMG, ! WRITE AND COMPRESS THE IMAGE FILE
148 0261 1 LNK$HANDLER, ! ERROR HANDLER
149 0262 1 LNK$GETCMD, ! GET COMMAND PARAMETERS
150 0263 1 LNK$MAPINIT, ! INITILIZE THE MAP OUTPUT
151 0264 1 LNK$MAPADROMD, ! MAP OBJ MODULES WITH .ADDRESS
152 0265 1 LNK$MAPISCTS, ! MAP IMAGE SECTIONS
153 0266 1 LNK$MAPPSCTS, ! MAP THE P-SECTIONS
154 0267 1 LNK$MAPSTATS, ! OUTPUT THE STATISTICS
155 0268 1 LNK$MAPSYMS, ! MAP THE SYMBOL TABLE
156 0269 1 LNK$OBJPASS1, ! OBJECT MODULE PASS 1
157 0270 1 LNK$OBJPASS2, ! AND PASS 2
158 0271 1 LNK$SYMTBLOUT, ! OUTPUT SYMBOL TABLES
159 0272 1 LNK$VMALLO, ! VIRTUAL MEMORY ALLOCATION AND RELOCATION
160 0273 1 LNK$WRTIMGHDR; ! WRITE THE IMAGE HEADER BLOCK(S)
161 0274 1
162 0275 1 EXTERNAL
163 0276 1 LNK$GL_CURFIL, ! FOR CLOSING LAST FILE...
164 0277 1 LNK$GB_PASS : BYTE, ! PASS NUMBER
165 0278 1 LNK$GB_MAXERCODE : BYTE, ! RECORDED ERROR CODE
166 0279 1 LNK$GL_CTLMASK : BBLOCK; ! CONTROL MASK
167 0280 1
168 0281 1 EXTERNAL LITERAL
169 0282 1 LINS_FATALERROR, ! FATAL ERROR MESSAGE ISSUED.
170 0283 1 LINS_WARNISUE, ! WARNING MESSAGES ISSUED
171 0284 1 LINS_ERRORISUE; ! ERRORS ISSUED
172 0285 1
173 0286 1 GLOBAL
174 0287 1 LNKSAW_VERSION : BLOCK [LIDSC_SIZE, BYTE] ! LINKER VERSION ARRAY
```

```
175 0288 1 INITIAL WORD (%ASCII '04') ! CURRENT VERSION
176 0289 1 WORD (%ASCII '00') ! AND ALTERATION NUMBER
177 0290 1
178 0291 1
179 0292 1 STARTING REAL TIMES:
180 0293 1
181 0294 1 LNK$GQ_STARTIM : VECTOR [2].           ! START TIME
182 0295 1 LNK$GQ_PS1STIM : VECTOR [2].          ! PASS 1 START TIME
183 0296 1 LNK$GQ_ALOSTIM : VECTOR [2].          ! ALLOCATION PHASE START TIME
184 0297 1 LNK$GQ_PS2STIM : VECTOR [2].          ! PASS 2 START TIME
185 0298 1 LNK$GQ_MAPSTIM : VECTOR [2].          ! REMAINDER OF MAP BEGINS
186 0299 1 LNK$GQ_STBSTIM : VECTOR [2].          ! SYMBOL TABLE OUTPUT BEGINS
187 0300 1
188 0301 1 CPU TIMES:
189 0302 1
190 0303 1 LNK$GL_CPUTIM.                         ! CPU TIME AT THE START OF LINK
191 0304 1 LNK$GL_PS1CPUT.                        ! PASS 1 CPU TIME (AT THE START)
192 0305 1 LNK$GL_ALOCPUT.                        ! ALLOCATION PHASE CPU TIME
193 0306 1 LNK$GL_PS2CPUT.                        ! PASS 2 CPU TIME
194 0307 1 LNK$GL_MAPCPUT.                        ! MAP OUTPUT CPU TIME
195 0308 1 LNK$GL_STBCPUT.                        ! SYMBOL TABLE OUTPUT CPU TIME
196 0309 1 LNK$GL_ENDCPUT.                        ! END CPU TIME
197 0310 1
198 0311 1 PAGE FAULT COUNTS:
199 0312 1
200 0313 1 LNK$GL_SPAGFLTS.                      ! PAGE FAULT COUNT AT START OF LINK
201 0314 1 LNK$GL_PS1FLTS.                        ! PAGE FAULT COUNT AT START OF PASS 1
202 0315 1 LNK$GL_ALOFLTS.                        ! DURING ALLOCATION/RELOCATION
203 0316 1 LNK$GL_PS2FLTS.                        ! PASS 2 PAGE FAULTS
204 0317 1 LNK$GL_MAPFLTS.                        ! MAP OUTPUT PAGE FAULTS
205 0318 1 LNK$GL_STBFLTS.                        ! SYMBOL TABLE OUTPUT PAGE FAULT COUNT
206 0319 1 LNK$GL_ENDFLTS.                        ! END PAGE FAULTS
```

```
208 0320 1 GLOBAL ROUTINE LNK$START (ARGLIST) : NOVALUE =
209 0321 1
210 0322 1      THIS IS THE MAIN ROUTINE OF THE LINKER, ITS PURPOSE
211 0323 1      BEING MERELY TO CALL THE ROUTINES THAT DO
212 0324 1      ALL THE WORK AND TO MONITOR THE PERFORMANCE OF EACH.
213 0325 1      ARGLIST IS THE ARGUMENT LIST PROVIDED ON ACTIVATION
214 0326 1      BY CLI. IT CONTAINS (AT OFFSET CLI$A UTILSERV)
215 0327 1      THE CLI RE-CALL ADDRESS REQUIRED FOR OBTAINING
216 0328 1      THE COMMAND PARAMETERS.
217 0329 1
218 0330 2 BEGIN
219 0331 2 OWN
220 0332 2 CURCPUTIM,          ! CPU TIME BUFFER
221 0333 2 CURPAGEFLTS,        ! PAGE FAULT COUNT BUFFER
222 0334 2 DATALIST          : ITEM DESCRIPTOR LIST
223 0335 2          : BLOCK [7]          ! LONGWORD OF CPU TIME
224 0336 2          : INITIAL (WORD (4), WORD (JPIS_CPUTIM))
225 0337 2          :          .LONG (CURCPUTIM), LONG (0)
226 0338 2          :          .WORD (4), WORD (JPIS_PAGEFLTS)    ! LONGWORD OF PAGE FAULTS
227 0339 2          :          .LONG (CURPAGEFLTS), [ONG (0)
228 0340 2          :          .LONG (JPIS_C_LISTEND)          ! END OF ITEM DESCRIPTOR LIST
229 0341 2
230 0342 2          ;:;
231 0343 2          ! ENABLE CONDITION HANDLER
232 0344 2          ! GET START VALUES
233 0345 2          ! SET PASS NUMBER
234 0346 2          ! PERFORM INITIALIZATION
235 0347 2          ! GO GET THE COMMAND PARAMETERS
236 0348 2          ! WITH NO RETURN IF IN ERROR
237 0349 2          ! SET PASS NUMBER
238 0350 2          ! GET START VALUES FOR PASS 1
239 0351 2          ! EXECUTE PASS1
240 0352 2          ! GET THE START VALUES OF ALLOCATION/RELOCATION PHAS
241 0353 2          ! ALLOCATE VIRTUAL MEMORY
242 0354 2          ! IF AN IMAGE IS REQUIRED
243 0355 2          ! GO GET IT STARTED
244 0356 2          ! IF A MAP IS REQUIRED
245 0357 2          ! START THE MAP
246 0358 2          ! SET PASS 2
247 0359 2          ! GET START VALUES FOR PASS 2
248 0360 2          ! EXECUTE PASS 2
249 0361 2
250 0362 2
251 0363 2
252 0364 2
253 0365 2
254 0366 2
255 0367 2
256 0368 2
257 0369 2
258 0370 2
259 0371 2
260 0372 2
261 0373 2
262 0374 2
263 0375 2
264 0376 2
```

```

265 0377 2 IF .LNK$GL_CTLMSK [LNK$V_IMAGE]           ! IF IMAGE PRODUCTION STILL ENABLED
266 0378 2 THEN LNK$FUSHIMG ();                   ! COMPRESS AND WRITE THE IMAGE FILE
267 0379 2
268 0380 2 $GETTIM (TIMADR = LNK$GQ_MAPSTIM);      ! START VALUES FOR BULK OF MAP OUTPUT
269 0381 2 $GETJPI (ITMLST = DATALIST);
270 0382 2 LNK$GL_MAPCPUT = .CURCPUTIM;
271 0383 2 LNK$GL_MAPFLTS = .CURPAGEFLTS;
272 0384 2 IF .LNK$GL_CTLMSK [LNK$V_MAPPN]          ! IF THE MAP IS STILL OPEN
273 0385 2 THEN BEGIN
274 0386 3   LNK$MAPADROMD ();
275 0387 3   LNK$MAPISCTS ();
276 0388 3   LNK$MAPPSCTS ();
277 0389 3   LNK$MAPSYMS ();
278 0390 2 END;
279 0391 2
280 0392 2 $GETTIM (TIMADR = LNK$GQ_STBSTM);        ! GET START VALUES FOR STB OUTPUT
281 0393 2 $GETJPI (ITMLST = DATALIST);
282 0394 2 LNK$GL_STBCPUT = .CURCPUTIM;
283 0395 2 LNK$GL_STBFLTS = .CURPAGEFLTS;
284 0396 2 LNK$SYMTBLOUT ();                      ! OUTPUT THE SYMBOL TABLE
285 0397 2
286 0398 2 IF .LNK$GL_CTLMSK [LNK$V_IMAGE]          ! IF THE IMAGE IS STILL OPEN
287 0399 2 THEN LNK$WRITIMGHDR ();                 ! OUTPUT THE HEADER AND CLOSE IT
288 0400 2
289 0401 2 $GETJPI (ITMLST = DATALIST);
290 0402 2 LNK$GL_ENDCPUT = .CURCPUTIM;
291 0403 2 LNK$GL_ENDFLTS = .CURPAGEFLTS;
292 0404 2
293 0405 2 IF .LNK$GL_CTLMSK [LNK$V_MAPPN]          ! IF THE MAP IS STILL OPEN
294 0406 3 THEN BEGIN
295 0407 3   LNK$MAPSTATS ();
296 0408 3   LNK$CLOSMAPFIL ();
297 0409 2 END;
298 0410 2
299 0411 3 LNK$EXIT ((IF .LNK$GB_MAXERCOD THEN SSS_NORMAL
300 0412 3           ELSE IF .LNK$GB_MAXFRCOD EQ[ STSSK_WARNING
301 0413 3           THEN LINS_WARNISUE
302 0414 3           ELSE LINS_ERRORISUE
303 0415 2         ));
304 0416 1 END;

```

```

.TITLE LNK_MAIN
.IDENT \V04-000\
.PSECT $OWNS,NOEXE,2

```

```

00000 CURCPUTIM:
00004 CURPAGEFLTS:
0004 00008 DATALIST:
0407 0000A .WORD 4
00000000 0000C .WORD 1031
00000000 00010 .ADDRESS CURCPUTIM
0004 00014 .LONG 0
0004 00014 .WORD 4

```

```
040A 00016 .WORD 1034
00000000 00018 .ADDRESS CURPAGEFLTS
00000000 0001C .LONG 0
00000000 00020 .LONG 0
;
.PSECT $GLOBALS$,NOEXE,2
34 30 00000 LNK$AW_VERSION:: .ASCII \04\
30 30 00002 .ASCII \00\
00004 LNK$GQ_STARTIM:: .BLKB 8
0000C LNK$GQ_PS1STIM:: .BLKB 8
00014 LNK$GQ_ALOSTIM:: .BLKB 8
0001C LNK$GQ_PS2STIM:: .BLKB 8
00024 LNK$GQ_MAPSTIM:: .BLKB 8
0002C LNK$GQ_STBSTM:: .BLKB 8
00034 LNK$GL_CPUTIM:: .BLKB 4
00038 LNK$GL_PS1CPUT:: .BLKB 4
0003C LNK$GL_ALOCPUT:: .BLKB 4
00040 LNK$GL_PS2CPUT:: .BLKB 4
00044 LNK$GL_MAPCPUT:: .BLKB 4
00048 LNK$GL_STBCPUT:: .BLKB 4
0004C LNK$GL_ENDCPUT:: .BLKB 4
00050 LNK$GL_SPAGFLTS:: .BLKB 4
00054 LNK$GL_PS1FLTS:: .BLKB 4
00058 LNK$GL_ALOFLTS:: .BLKB 4
0005C LNK$GL_PS2FLTS:: .BLKB 4
00060 LNK$GL_MAPFLTS:: .BLKB 4
00064 LNK$GL_STBFLTS:: .BLKB 4
00068 LNK$GL_ENDFLTS:: .BLKB 4
;
.EXTRN LNK$CLOSEFILE, LNK$CLOSMAPFIL
.EXTRN LNK$CLOSIMGFIL, LNK$CLOSYMOUP
.EXTRN LNK$IMGINIT, LNK$INIT
.EXTRN LNK$FLUSHIMG, LNK$HANDLER
.EXTRN LNK$GETCMD, LNK$MAPINIT
.EXTRN LNK$MAPADROMD, LNK$MAPISCTS
```

.EXTRN LNK\$MAPSCTS, LNK\$MAPSTATS  
 .EXTRN LNK\$MAPSYMS, LNK\$OBJPASS1  
 .EXTRN LNK\$OBJPASS2, LNK\$SYMTBLOUT  
 .EXTRN LNK\$VMALLO, LNK\$WRTIMGHDR  
 .EXTRN LNK\$GL\_CURFILE, LNK\$GB\_PASS  
 .EXTRN LNK\$GB\_MAXERCODE  
 .EXTRN LNK\$GL\_CTLMSK, LINS\_FATALERROR  
 .EXTRN LINS\_WARNISUE, LINS\_ERRORISUE  
 .EXTRN SYSSGETTIM, SYS\$GETJPI

.PSECT SCODE\$, NOWRT, 2

57 00000000G	00	00FC	00000	.ENTRY LNK\$START, Save R2,R3,R4,R5,R6,R7	: 0320	
56 00000000G	00	9E	00002	MOVAB LNK\$GB_PASS, R7		
55 00000000G	00	9E	00009	MOVAB LNK\$GL_CTLMSK, R6		
54 00000000G	00	9E	00010	MOVAB SYSSGETTIM, R5		
53 00000000'	EF	9E	00017	MOVAB SYSSGETJPI, R4		
52 00000000'	EF	9E	00025	MOVAB LNK\$GO_STARTIM, R3		
60 017E	CF	DE	0002C	MOVAB DATALIST, R2		
65	53	DD	00031	MOVAL 11\$, (FP)		
	01	FB	00033	PUSHL R3		
	7E	7C	00036	CALLS #1, SYSSGETTIM		
	7E	D4	00038	CLRQ -(SP)		
	52	DD	0003A	CLRL -(SP)		
	7E	7C	0003C	PUSHL R2		
	7E	D4	0003E	CLRQ -(SP)		
	64	07	FB	00040	CLRL -(SP)	
30 A3	F8	A2	00	00043	CALLS #7, SYSSGETJPI	
4C A3	FC	A2	00	00048	MOVL CURCPUTIM, LNK\$GL_CPUTIM	
00000000G	00	00	FB	0004D	MOVL CURPAGEFLTS, LNK\$GL_SPAGFLTS	
00000000G	00	5C	DD	00054	CALLS #0, LNK\$INIT	
	01	FB	00056	PUSHL AP		
67	01	90	0005D	CALLS #1, LNK\$GETCMD		
65	08	A3	9F	00060	MOVB #1, LNK\$GB_PASS	
	01	FB	00063	PUSHAB LNK\$GO_PS1STIM		
	7E	7C	00066	CALLS #1, SYSSGETTIM		
	7E	D4	00068	CLRQ -(SP)		
	52	DD	0006A	CLRL -(SP)		
	7E	7C	0006C	PUSHL R2		
	7E	D4	0006E	CLRQ -(SP)		
	64	07	FB	00070	CLRL -(SP)	
34 A3	F8	A2	00	00073	CALLS #7, SYSSGETJPI	
50 A3	FC	A2	00	00078	MOVL CURCPUTIM, LNK\$GL_PS1CPUT	
00000000G	00	5C	DD	0007D	MOVL CURPAGEFLTS, LNK\$GL_PS1FLTS	
	01	FB	0007F	PUSHL AP		
	10	A3	9F	00086	CALLS #1, LNK\$OBJPASS1	
	01	FB	00089	PUSHAB LNK\$GO_ALOSTIM		
65	01	7C	0008C	CALLS #1, SYSSGETTIM		
	7E	D4	0008E	CLRQ -(SP)		
	52	DD	00090	CLRL -(SP)		
	7E	7C	00092	PUSHL R2		
	7E	D4	00094	CLRQ -(SP)		
	64	07	FB	00096	CLRL -(SP)	
38 A3	F8	A2	00	00099	CALLS #7, SYSSGETJPI	
54 A3	FC	A2	00	0009E	MOVL CURCPUTIM, LNK\$GL_ALOCPUT	
00000000G	00	00	FB	000A3	MOVL CURPAGEFLTS, LNK\$GL_ALOFLTS	
				CALLS #0, LNK\$VMALLO		

07	00000000G	07	66	E9 000AA	BLBC	LNK\$GL CTLMSK, 1\$	: 0364
	00	00	00	FB 000AD	CALLS	#0, LNR\$IMGINIT	: 0365
	66	66	04	E1 000B4	1\$:	BBC #4, LNK\$GL CTLMSK, 2\$	: 0366
	00000000G	00	00	FB 000B8	CALLS	#0, LNK\$MAPINIT	: 0367
	67	67	02	90 000BF	2\$:	MOVB #2, LNK\$GB PASS	: 0369
			A3	9F 000C2		LNK\$GQ PS2\$TIM	: 0371
			01	FB 000C5		#1, SY5\$GETTIM	
			7E	7C 000C8		-(SP)	
			7E	D4 000CA		-(SP)	
			52	DD 000CC		PUSHL R2	
			7E	7C 000CE		CLRQ -(SP)	
			7E	D4 000D0		CLRL -(SP)	
			07	FB 000D2		CALLS #7, SY5\$GETJPI	
			A2	DO 000D5		MOVL CURCPUTIM, LNK\$GL PS2CPUT	
			A2	DO 000DA		MOVL CURPAGEFLTS, LNK\$GL_PS2FLTS	
			00	FB 000DF		CALLS #0, LNK\$OBJPASS2	
			66	E9 000E6		BLBC LNK\$GL CTLMSK, 3\$	
			00	FB 000E9		CALLS #0, LNR\$FLUSHIMG	
			A3	9F 000F0	3\$:	PUSHAB LNK\$GQ MAPSTIM	
			01	FB 000F3		CALLS #1, SY5\$GETTIM	
			7E	7C 000F6		CLRQ -(SP)	
			7E	D4 000F8		CLRL -(SP)	
			52	DD 000FA		PUSHL R2	
			7E	7C 000FC		CLRQ -(SP)	
			7E	D4 000FE		CLRL -(SP)	
			07	FB 00100		CALLS #7, SY5\$GETJPI	
			A2	DO 00103		MOVL CURCPUTIM, LNK\$GL MAPCPU	
			A2	DO 00108		MOVL CURPAGEFLTS, LNK\$GL_MAPFLTS	
			05	E1 0010D		BBC #5, LNK\$GL CTLMSK, 4\$	
			00	FB 00111		CALLS #0, LNK\$MAPADROMD	
			00	FB 00118		CALLS #0, LNK\$MAPISCTS	
			00	FB 0011F		CALLS #0, LNK\$MAPPSCTS	
			00	FB 00126		CALLS #0, LNK\$MAPSYMS	
			A3	9F 0012D	4\$:	PUSHAB LNK\$GQ STB\$TIM	
			01	FB 00130		CALLS #1, SY5\$GETTIM	
			7E	7C 00133		CLRQ -(SP)	
			7E	D4 00135		CLRL -(SP)	
			52	DD 00137		PUSHL R2	
			7E	7C 00139		CLRQ -(SP)	
			7E	D4 0013B		CLRL -(SP)	
			07	FB 0013D		CALLS #7, SY5\$GETJPI	
			A2	DO 00140		MOVL CURCPUTIM, LNK\$GL STBCPUT	
			A2	DO 00145		MOVL CURPAGEFLTS, LNK\$GL_STBFLTS	
			00	FB 0014A		CALLS #0, LNK\$SYMIBLOUT	
			66	E9 00151		BLBC LNK\$GL CTLMSK, 5\$	
			00	FB 00154		CALLS #0, LNR\$WRTIMGHDR	
			7E	7C 0015B	5\$:	CLRQ -(SP)	
			7E	D4 0015D		CLRL -(SP)	
			52	DD 0015F		PUSHL R2	
			7E	7C 00161		CLRQ -(SP)	
			7E	D4 00163		CLRL -(SP)	
			07	FB 00165		CALLS #7, SY5\$GETJPI	
			A2	DO 00168		MOVL CURCPUTIM, LNK\$GL ENDCPUT	
			A2	DO 0016D		MOVL CURPAGEFLTS, LNK\$GL_ENDFLTS	
			05	E1 00172		BBC #5, LNK\$GL CTLMSK, 6\$	
			00	FB 00176		CALLS #0, LNK\$MAPSTATS	
			00	FB 0017D		CALLS #0, LNK\$CLOSMAPFILE	

50 0000000G	00	9A 00184	6\$:	MOVZBL	LNK\$GB_MAXERCOD, R0	0411
04		50 E9 0018B		BLBC	R0, 7\$	
		01 DD 0018E		PUSHL	#1	
		14 11 00190		BRC	10\$	
		09 12 00192	7\$:	BNLQ	8\$	0412
50 0000000G	8F	DD 00194		MOVL	#LINS_WARNISUE, R0	
	07	11 0019B		BRB	9\$	
50 0000000G	8F	DD 0019D	8\$:	MOVL	#LINS_ERRORISUE, R0	
	50	DD 001A4	9\$:	PUSHL	R0	
0000000V	EF	01 FB 001A6	10\$:	CALLS	#1, LNK\$EXIT	0411
		04 001AD		RET		0416
		0000 001AE	11\$:	.WORD	Save nothing	0330
		7E D4 001B0		CLRL	-(SP)	
		5E DD 001B2		PUSHL	SP	
0000000G	7E	04 AC 7D 001B4		MOVQ	4(AP), -(SP)	
	00	03 FB 001B8		CALLS	#3, LNK\$HANDLER	
		04 001BF		RET		

: Routine Size: 448 bytes, Routine Base: \$CODE\$ + 0000

```

306 0417 1 GLOBAL ROUTINE LNK$EXIT (EXITCODE) : NOVALUE=
307 0418 1 !
308 0419 1 ! LINKER TERMINATION ROUTINE
309 0420 1 !
310 0421 2 BEGIN
311 0422 3 IF .EXITCODE NEQ SSS_NORMAL
312 0423 3 THEN BEGIN
313 0424 3 LNK$CLOSYMFIL (0);           ! CLOSE ANY SYMBOL TABLE OUTPUT
314 0425 3 LNK$CLOSIMGFIL ();        ! CLOSE THE IMAGE FILE
315 0426 3 LNK$CLOSMAPFIL ();       ! CLOSE THE MAP FILE
316 0427 2 END;
317 0428 2
318 0429 2 SEXIT (CODE = .EXITCODE OR STSSM_INHIB_MSG);
319 0430 1 END;

```

## .EXTRN SYS\$EXIT

01	04	0000 00000	.ENTRY LNK\$EXIT, Save nothing	0417
		AC D1 00002	CMPL EXITCODE, #1	0422
		17 13 00006	BEQL 1\$	
		7E D4 00008	CLRL -(SP)	0424
00000000G	00	01 FB 0000A	CALLS #1, LNK\$CLOSYMFIL	
00000000G	00	00 FB 00011	CALLS #0, LNK\$CLOSIMGFIL	0425
00000000G	00	C0 FB 00018	CALLS #0, LNK\$CLOSMAPFIL	0426
7E 04	AC 10000000	8F C9 0001F 1\$:	BISL3 #268435456, EXITCODE, -(SP)	0429
00000000G	00	01 FB 00028	CALLS #1, SYS\$EXIT	
		04 0002F	RET	0430

; Routine Size: 48 bytes, Routine Base: \$CODE\$ + 01C0

320 0431 1  
321 0432 0 END ELUDOM

## PSECT SUMMARY

Name	Bytes	Attributes
\$GLOBALS	108	NOVEC, WRT, RD, NOEXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)
\$OWNS	36	NOVEC, WRT, RD, NOEXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)
\$CODE\$	496	NOVEC, NOWRT, RD, EXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)

## Library Statistics

File	----- Symbols -----			Pages Mapped	Processing Time
	Total	Loaded	Percent		

LNK MAIN  
V04=000

C 1  
16-Sep-1984 00:04:27  
14-Sep-1984 12:40:27 VAX-11 Bliss-32 V4.0-742  
[LINKER.SRC]LINKER.B32;1

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(4)

: -\$255\$DUA28:[SYSLIB]LIB.L32;1  
: -\$255\$DUA28:[LINKER.OBJ]DATBAS.L32;1

18619 17 0 1000 00:02.0  
538 4 0 28 00:00.8

COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=L:SS:LINKER/OBJ=OBJ\$:LINKER MSRC\$:LINKER/UPDATE=(ENH\$:LINKER)

: Size: 496 code + 144 data bytes  
: Run Time: 00:12.3  
: Elapsed Time: 00:39.2  
: Lines/CPU Min: 2110  
: Lexemes/CPU-Min: 15771  
: Memory Used: 149 pages  
: Compilation Complete

0215 AH-BT13A-SE  
VAX/VMS V4.0

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LINKER  
LIS

STRPOSIT  
LIS

STRPOSEXT  
LIS

STRREPLAC  
LIS

STRSRCHIN  
LIS

STRUNVIDEO  
LIS

STRRIGHT  
LIS

STRTRIM  
LIS

LINKER

LINK  
MAP

PREFIX  
REQ

ISDSORT  
LIS

STRUPCASE  
LIS

DATBAS  
MDL

TIRAIUX  
REQ

ISGENC  
REQ

DATBAS  
LIS

STRPREFIX  
LIS

STRTRANSL  
LIS

DATBAS  
MDL

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